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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,960	01/27/2006	Tingfu Zhang	7002/4	9226
27774	7590	12/13/2007		
MAYER & WILLIAMS PC 251 NORTH AVENUE WEST 2ND FLOOR WESTFIELD, NJ 07090			EXAMINER LEYSON, JOSEPH S	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,960	Applicant(s) ZHANG ET AL.	
	Examiner Joseph Leyson	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 9,11-19,22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 24, 2007 has been entered.

Claim Objections

2. Claims 9, 11-19, 22 and 23 are objected to because of the following informalities: for proper idiomatic language and/or spelling, in claim 9, line 4, which should be inserted after "cavity"; in claim 11, line 4, "bank" should be changed to --tank--; and in claim 22, line 3, "periphery-inner circle periphery" should be changed to -- periphery-inner circle-periphery --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10, 15-17, 22 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 16 and 22 recite a water passage near a periphery of the molding blocks. Claim 15 recites a water passage in the molding blocks. However, all such subject matter is NEW MATTER because it is not originally disclosed. The specification (i.e., p. 2, last two lines; p. 5, lines 11-12) discloses slots (i.e., water passages) on a periphery of the molding blocks, and fig. 4 shows water passages 21 on or at the periphery of a molding block 2. A water passage NEAR a periphery of the molding blocks or a water passage IN the molding blocks are both different embodiments for the water passage, which are not originally disclosed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11-14 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Gatto (US 3,538,210).

Gatto (US 3,538,210) teaches a cooling and molding water tank for extrusion of a plastic profile, comprising a tank body 40 having a front end block 43 and a rear end block 44, a top cover 41, two side plates 45, 46, a bottom plate 42, a vacuum valve and a vacuum gauge (i.e., shown but not labeled in fig. 1; col. 8, lines 26-50) for controlling vacuum in the tank, an inlet pipe (i.e., 90) near the front end block and an outlet pipe 82

near the rear end block for providing a cooling water to flow through said tank body along a longitudinal direction (i.e., col. 8, lines 26-50), and a plurality of molding blocks 55-65 (11 in number) provided inside the tank body, wherein a plurality of water collection plates 66 and 110-112 (4 in number) are provided inside the tank body, each having an internal cavity in a similar shape to that of said plastic profile and with a lateral dimension larger than an peripheral dimension of said plastic profile, thereby forming a substantially uniformed gap between said water collection plates 66 and 110-112 and said plastic profile to allow said cooling water passing said internal cavity to cool said profile homogeneously (i.e., col. 7, lines 5-21). The water collection plates are arranged to be spaced from said molding blocks along said longitudinal direction (i.e., fig. 1). The molding blocks and said water collection plates are arranged to be more dense from the rear end block toward the front end block (i.e., fig. 1). Note that molding plates 55-65 also have an internal cavity forming a gap around the profile enabling passage of cooling water (i.e., figs. 3 and 6; col. 7, line 65, to col. 8, line 25. Thus, plates 55-65 both size and cool the profile. Therefore, plates 55, 57, 59, 61, 63, 65 can be called molding blocks, and plates 56, 58, 60, 62, 64 can be called water collection plates. The profile has a complicated contour (i.e., fig. 5). A water passage is provided near a periphery of each of said molding blocks to allow said cooling water to pass therethrough and flow in said tank in a periphery-inner circle-periphery pattern. In figs. 1-4, note that cooling water is allowed to flow around the periphery of the molding blocks and the water collection plates and to flow through the gap therein. Thus, as water flows from the front end block 43 to the rear end block 44, water can flow in a

periphery-inner circle-periphery pattern. As shown in figs. 3 and 6, the shape of some parts of the internal cavity which are overlapped, adjacent or complicated are simplified, i.e., the shape of the internal cavity is close to the profile shape for simplification.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210).

Gatto (US 3,538,210) discloses the water tank substantially as claimed, as mentioned above, except for the lateral dimension of said internal cavity of said water collection plates being 0.5 - 8 mm larger than said peripheral dimension of said plastic profile. However, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made, to modify the water tank with such dimensions because such dimensions would have been found due to routine engineering in view of the teachings of Gatto (US 3,538,210) to find operable or optimum dimensions for the gap and/or because where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device, In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

10. Claims 15-17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210) in view of Wegmaier et al. (US 6,244,847) .

Gatto (US 3,538,210) discloses the water tank substantially as claimed, as mentioned above, except for the water passage, as recited by instant claims 15-17 and 23.

Wegmaier et al. (US 6,244,847) discloses U shaped water passage slots 25 provided in molding blocks (i.e., figs. 3, 4) located at or near a periphery thereof for allowing passage of cooling water.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the water passages of Gatto (US 3,538,210) with the water passages of Wegmaier et al. (US 6,244,847) because they are art recognized alternative configurations for allowing passage of cooling water.

11. Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210) in view of Racioppi et al. (U.S. Patent 5,780,071) and Dorninger (U.S. Patent 5,505,058).

Gatto (US 3,538,210) discloses the water tank substantially as claimed, as mentioned above, except for foot plates, the inlet and outlet pipes being on the side plates, a vacuum valve and a vacuum gauge on the top cover, or the gap being 0.5-8 mm, as recited by the instant claims.

Racioppi et al. (U.S. Patent 5,780,071) discloses molding blocks 10, 12, 14, 16 bolted to a plurality of foot plates 18, 26, 28 which enable changeover of the molding blocks (i.e., col. 3, lines 4-39).

Dorninger (U.S. Patent 5,505,058) discloses a cooling and molding water tank 2 having means for providing water and vacuum to the tank which includes an inlet pipe 12 provided on a side plate 4 of the water tank near a rear end block 5, an outlet pipe 13 provided near the front end block 1, and a vacuum valve 15, 16 and a vacuum gauge 17 provided on a top cover of the water tank. The inlet pipe 12 is provided near the rear end block and the outlet pipe 13 is provided near the front end block, so that water flow is counter-current to the extruded profile (i.e., col. 2, line 63, to col. 3, line 2).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the tank of Gatto (US 3,538,210) with foot plates because such a modification would enable changeover as disclosed by Racioppi et al. (U.S. Patent 5,780,071), to modify the tank of Gatto (US 3,538,210) with the means for providing water and vacuum of Dorninger (U.S. Patent 5,505,058) because such a

modification is well known and conventional in the art and would provide an alternative means for providing water and vacuum to the tank of Gatto (US 3,538,210), to further modify the inlet and outlet pipes to be provided on the side plates because to shift location of parts when operation of the device is not otherwise modified is obvious, In re Japikse, 86 USPQ 70, and to modify the gap with the instantly claimed dimensions because such dimensions would have been found due to routine engineering in view of the teachings of Gatto (US 3,538,210) to find operable or optimum dimensions for the gap and/or because where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device, In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). As to instant claim 2, Dorninger (U.S. Patent 5,505,058) discloses molding blocks 8, 8a, 8b which are securely inserted into a receptacle of the tank 2 at the internal side of the side plates 4 of the water tank, which have a limited freedom of motion in the longitudinal, transverse and vertical directions (i.e., figs. 1-3). Therefore, it would have been further obvious to modify the apparatus with the tank and the molding blocks of Dorninger (U.S. Patent 5,505,058) because such a modification would provide a means for securing the molding blocks such that the mold blocks have a limited freedom of motion in the longitudinal, transverse and vertical directions and because such a modification would increase flow turbulence to increase profile cooling, as disclosed by Dorninger (U.S. Patent 5,505,058).

12. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210) in view of Racioppi et al. (U.S. Patent 5,780,071) and Dorninger (U.S. Patent 5,505,058) as applied to claims 1-4 and 9 above, and further in view of Tucking et al. (US 3,717,426).

Tucking et al. (US 3,717,426) discloses a water passage being a U shaped slot at a periphery of a molding block (i.e., see fig. 4b wherein the U shaped slot is at the bottom of the molding block).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the water passage with the U shaped slot of Tucking et al. (US 3,717,426) because such a modification is an art recognized alternative configuration for a water passage. As to the dimensions of the U shaped slot recited by the instant claim 6, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device, In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

13. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210) in view of Racioppi et al. (U.S. Patent 5,780,071) and Dorninger (U.S. Patent 5,505,058) as applied to claims 1-4 and 9 above, and further in view of Kossel (U.S. Patent Application Publication US 2003/0219503).

Kossl (U.S. Patent Application Publication US 2003/0219503) discloses an adjusting mechanism for changing the shape of a profile cavity passage which is provided on the long side of the profile cavity passage of a molding block 17, the adjusting mechanism including a through kurf 37 which is parallel to and a close distance from the plane of the long side of the profile cavity passage, and at least one through screw hole 53 which is provided on and perpendicular to the plane of the long side, and intersects with the lower side of the kurf 37, wherein an adjusting screw 53 is engaged with the screw hole 53 and the top of the adjusting screw 53 may extend against the upper side of said kurf 37 (i.e., paragraph [0073]).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the tank with the adjusting mechanism of Kossl (U.S. Patent Application Publication US 2003/0219503) because such a modification would enable the shape of the profile cavity passage to be changed.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatto (US 3,538,210) in view of Racioppi et al. (U.S. Patent 5,780,071) and Dorninger (U.S. Patent 5,505,058) as applied to claims 1-4 and 9 above, and further in view of Grassi (U.S. Patent 6,394,782).

Grassi (U.S. Patent 6,394,782) discloses that it is typical for elements of a tank to be made from aluminum (i.e., col. 11, lines 13-17).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the tank to be made from aluminum because such a modification is well known and conventional in the art as disclosed by Grassi

(U.S. Patent 6,394,782) and would provide the tank with a material known to be operable in the art for cooling and molding a profile.

Response to Arguments

15. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (571) 272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JL

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PRIMARY EXAMINER
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12/10/07